

FIG. 1

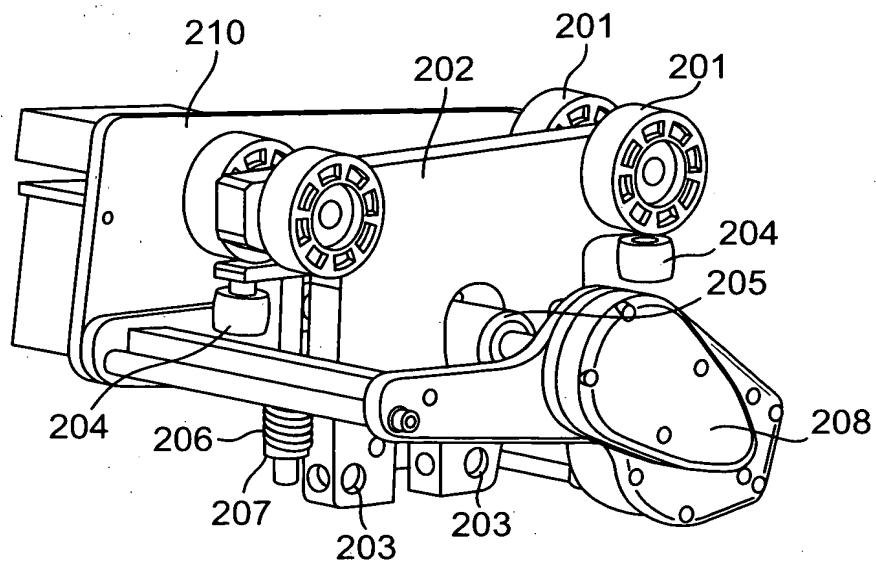


FIG. 2

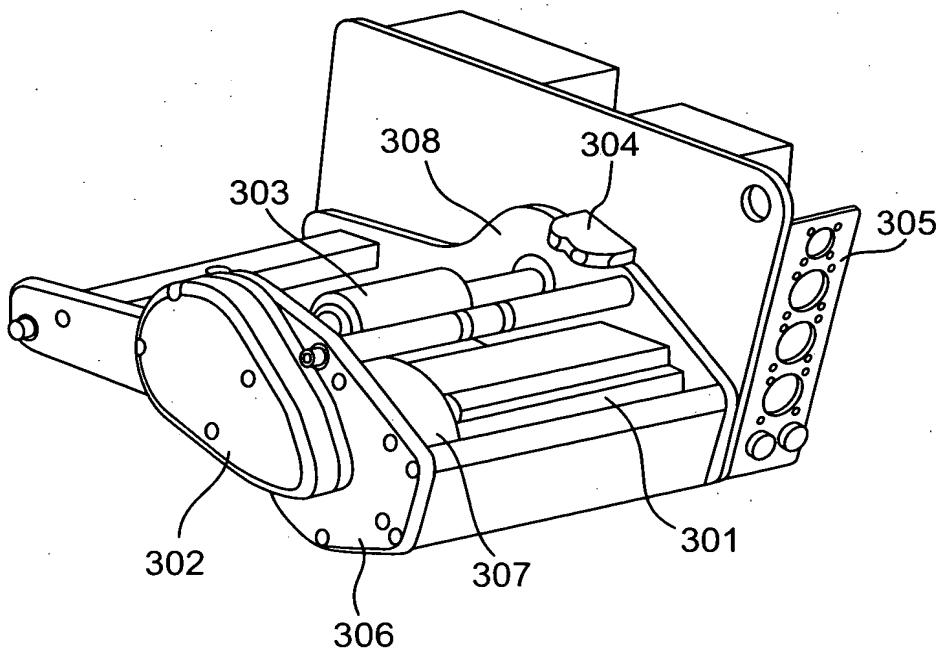


FIG. 3

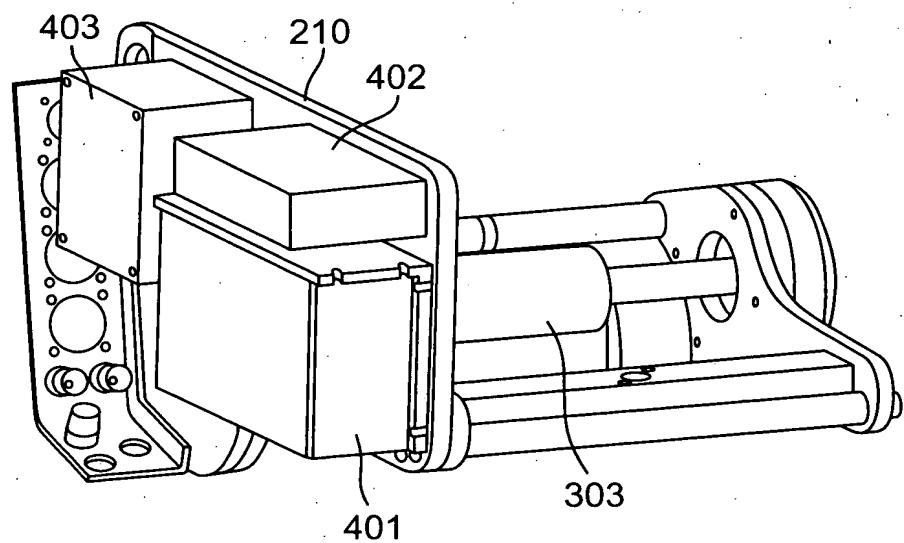


FIG. 4

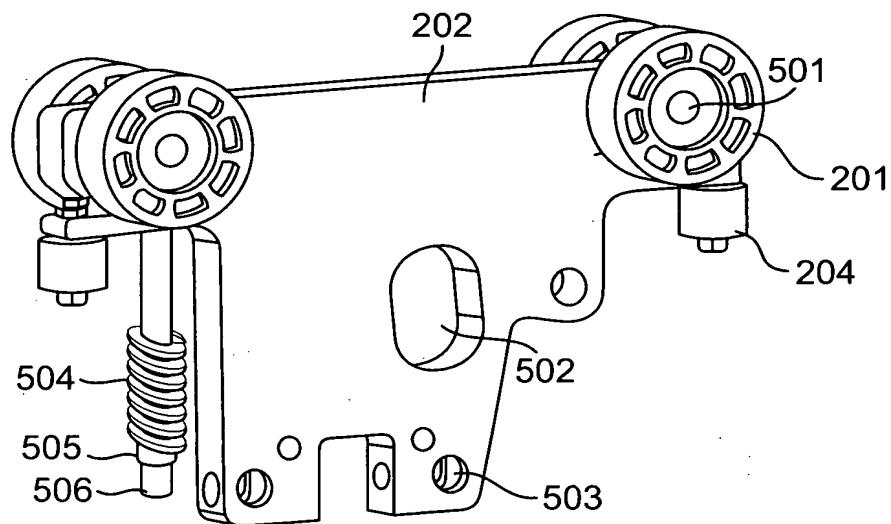


FIG. 5

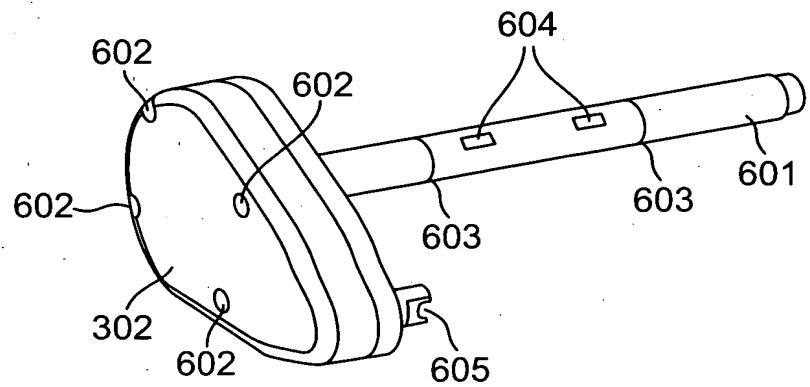


FIG. 6

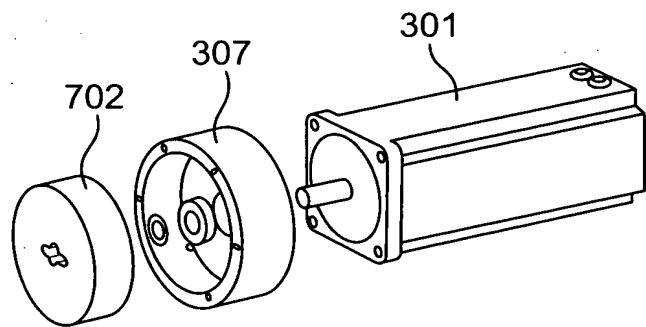


FIG. 7

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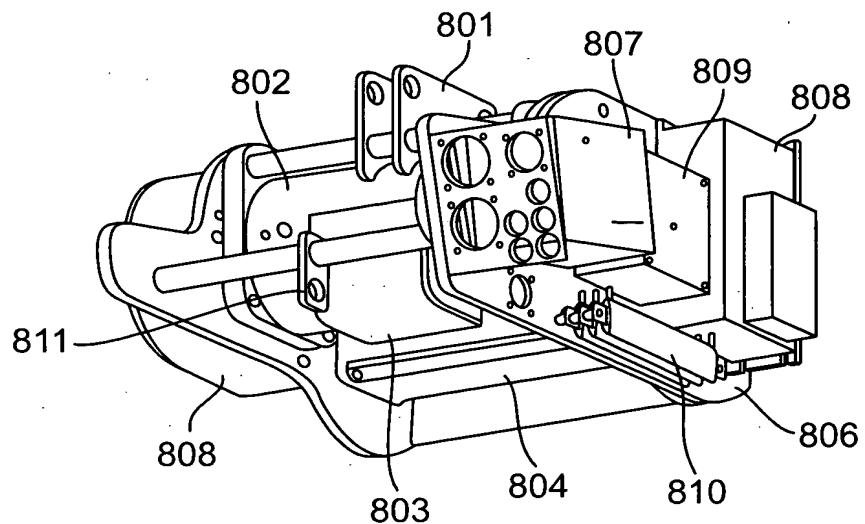


FIG. 8

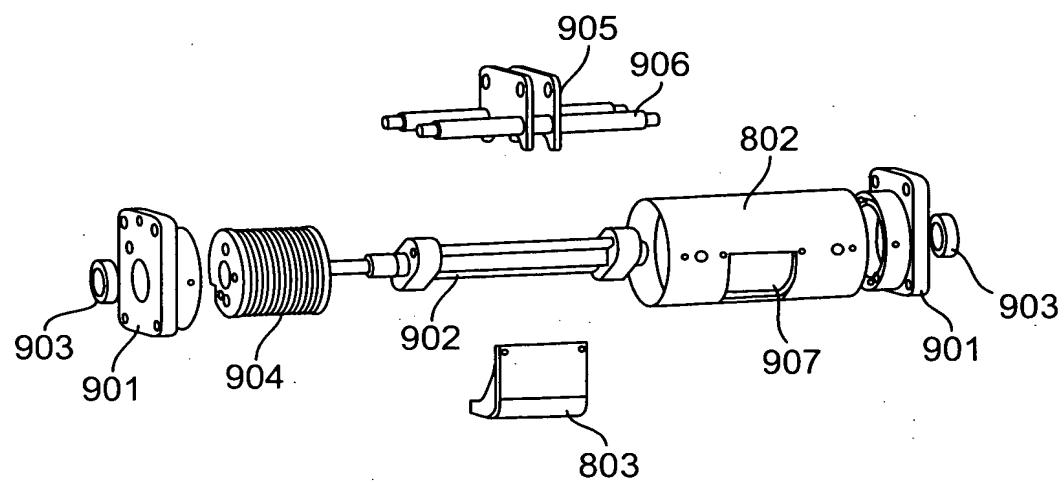


FIG. 9

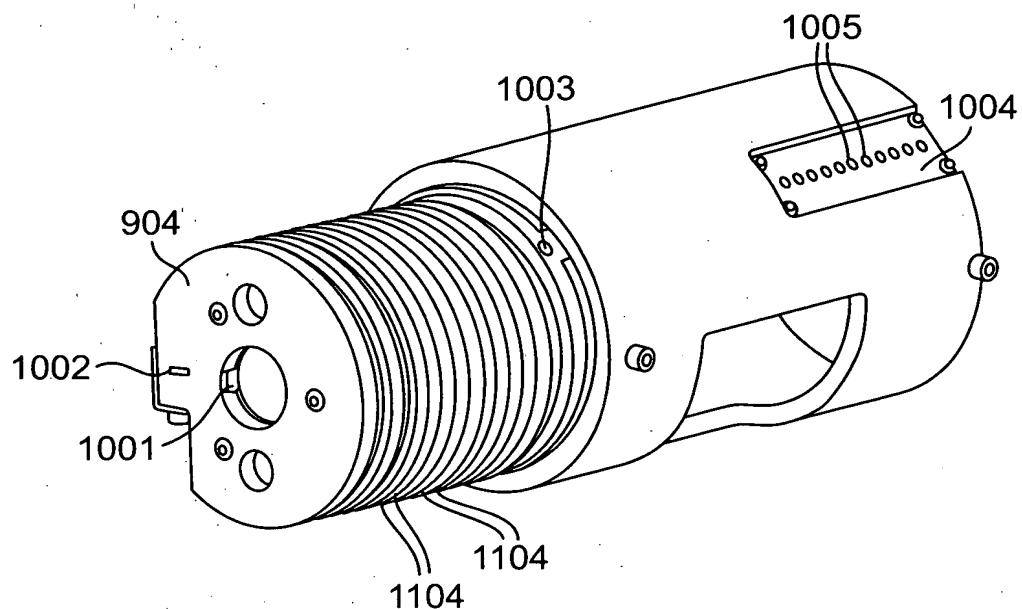


FIG. 10

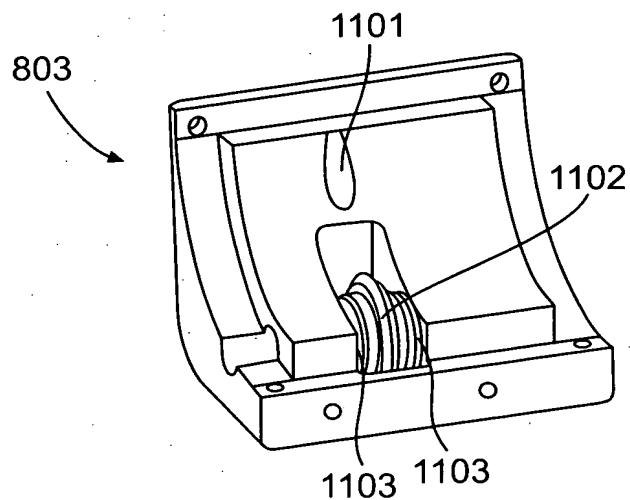


FIG. 11

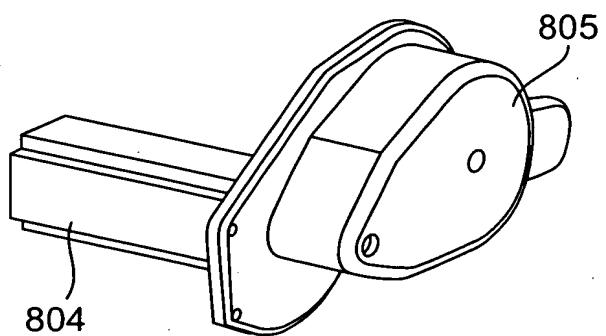


FIG. 12

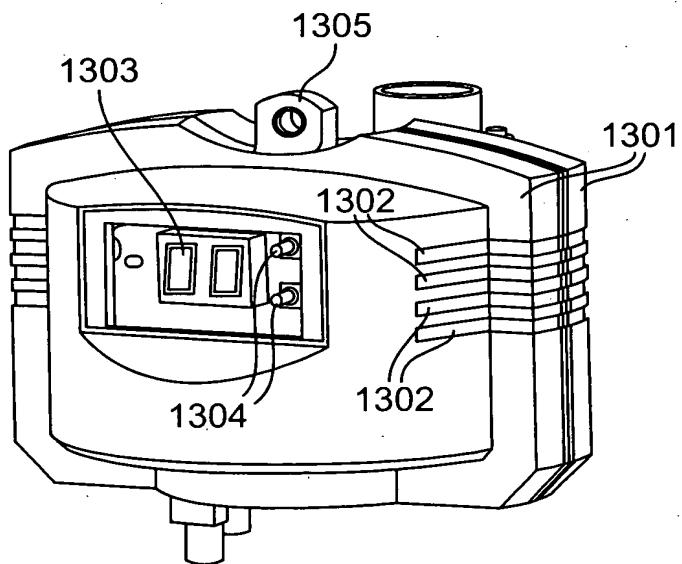


FIG. 13

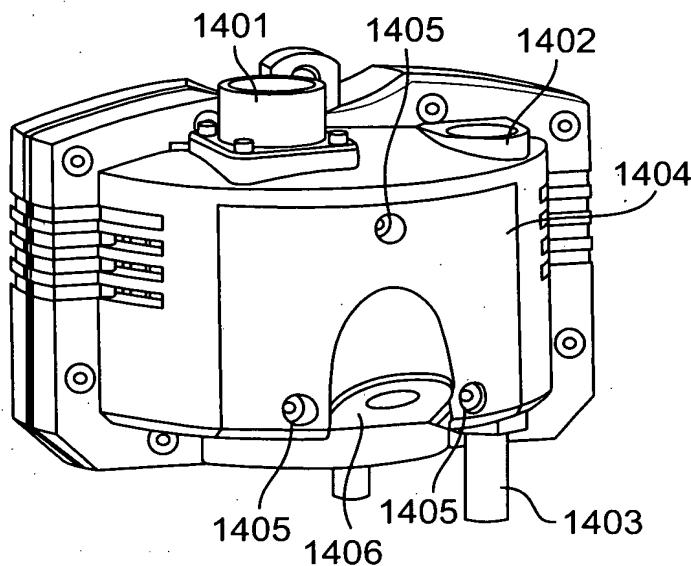


FIG. 14

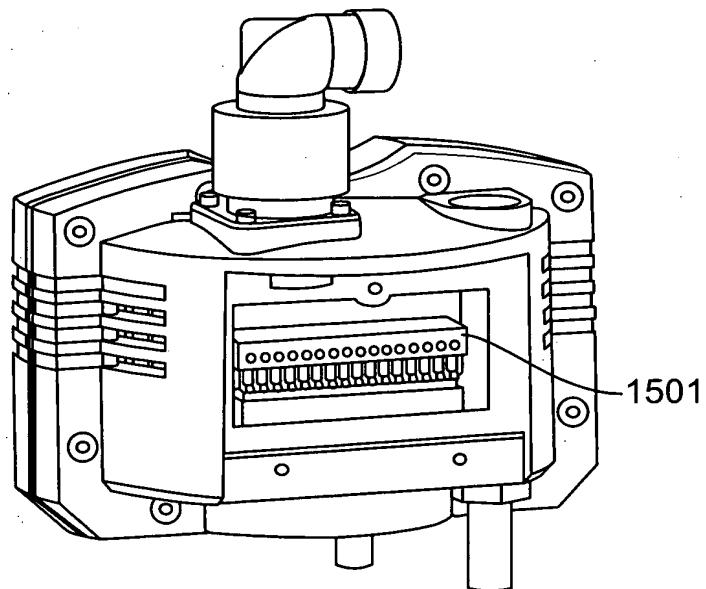


FIG. 15

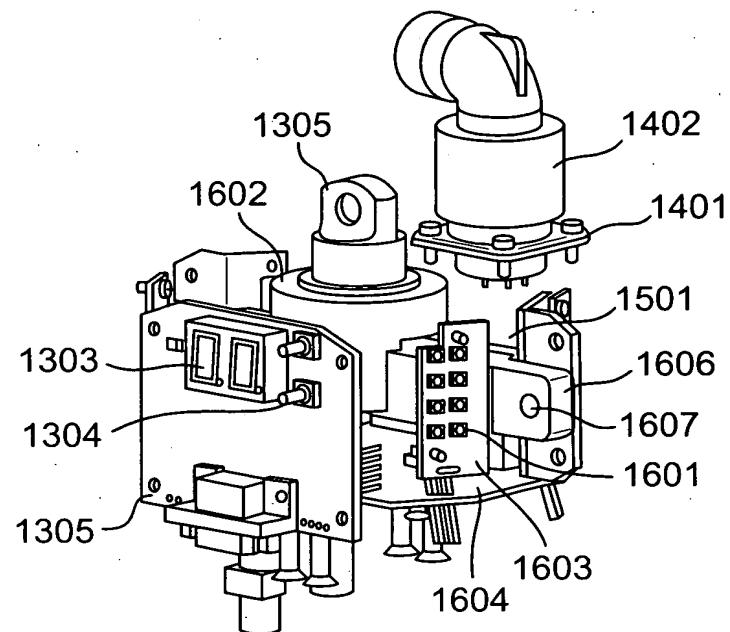


FIG. 16

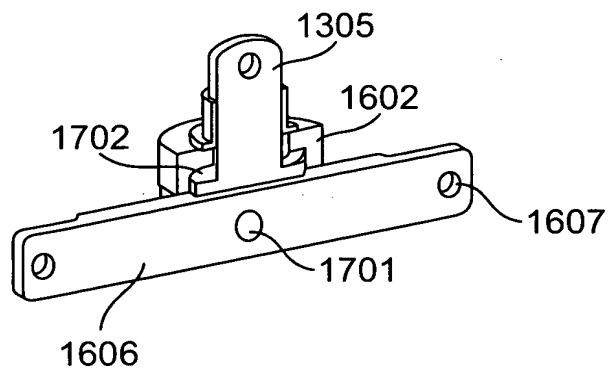


FIG. 17

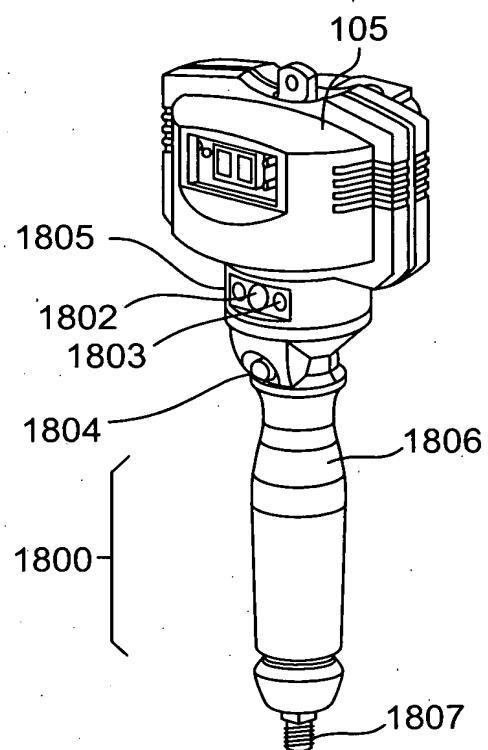


FIG. 18

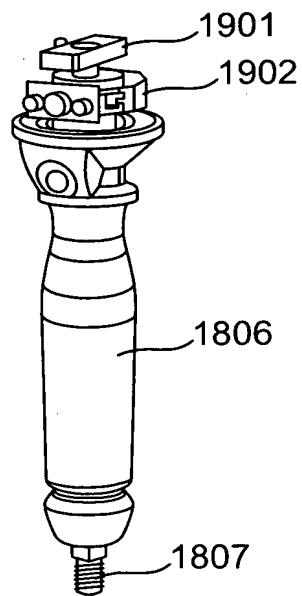


FIG. 19

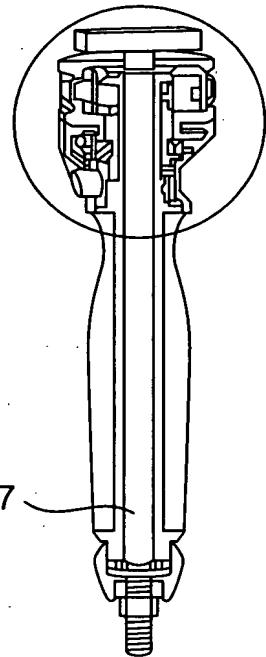


FIG. 20A

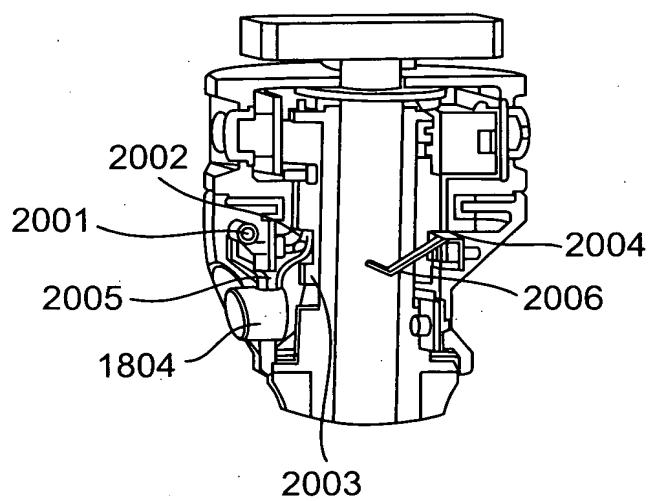


FIG. 20B

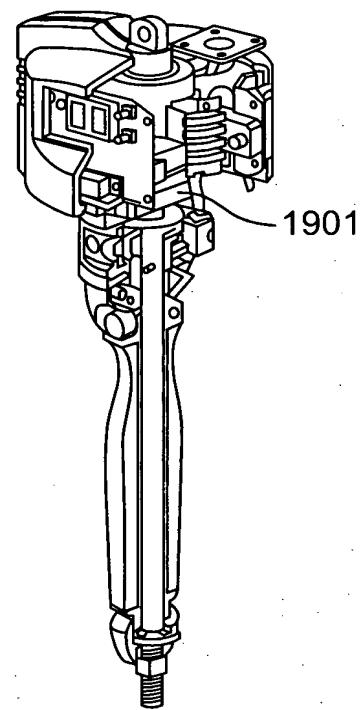


FIG. 21

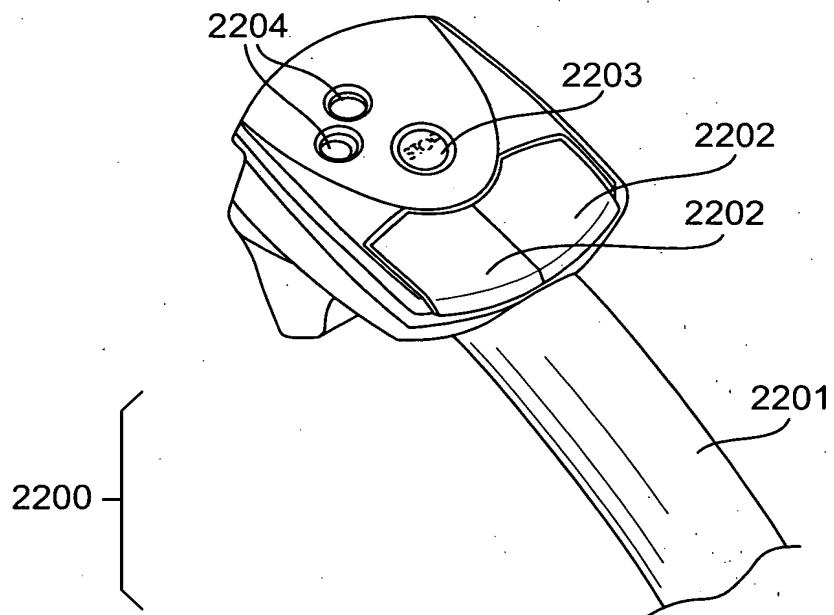


FIG. 22

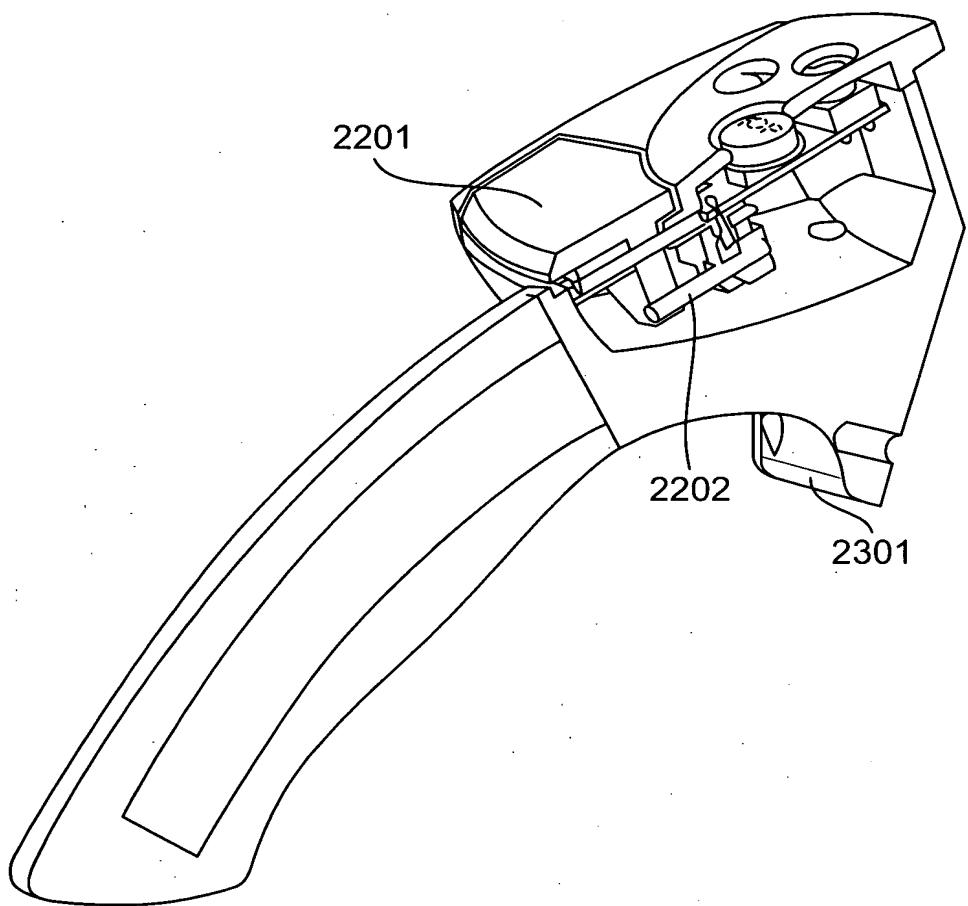


FIG. 23

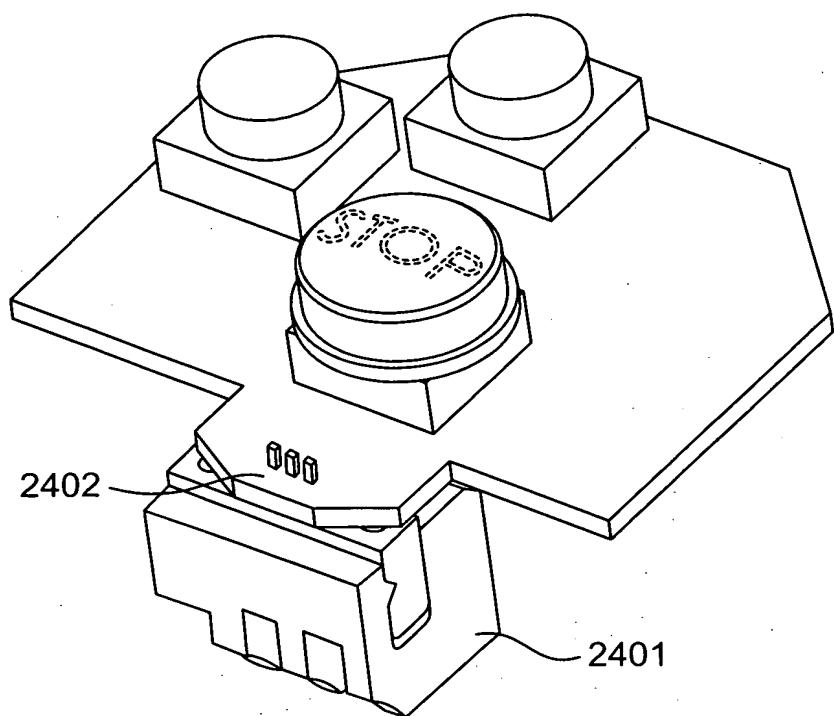


FIG. 24

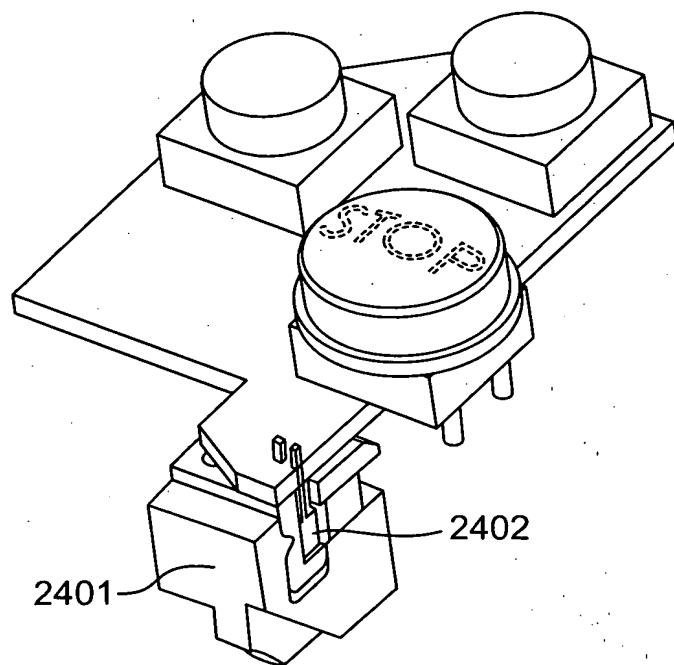


FIG. 25



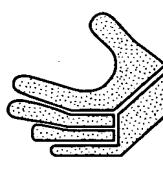
2601	<input type="checkbox"/> COBOTICS CONFIG - NAME OF INSTALLED SYSTEM <input type="checkbox"/> FILE <input type="checkbox"/> COVER <input type="checkbox"/> LAYOUT <input type="checkbox"/> IDENT <input type="checkbox"/> MOTION <input type="checkbox"/> LIFT <input type="checkbox"/> TROLLEY <input type="checkbox"/> HUB-LOGIC <input type="checkbox"/> PROFILES <input type="checkbox"/> AUTO RETURN <input type="checkbox"/> LOGGING <input type="checkbox"/> TX <input type="checkbox"/> RX <input type="checkbox"/> CONNECT <input type="checkbox"/> PC-TO-HUB DATALINK <input type="checkbox"/> SHOWING ACTIVE DATASET									
2604	2603	2603								
		<p>NOTES</p> <p>HERE YOU CAN KEEP NOTES ON THE SYSTEM, AND THESE NOTES ARE STORED ON THE EQUIPMENT, SO SOMEONE ELSE COMING ALONG WITH A DIFFERENT PC CAN READ YOUR NOTES.</p>								
		 <p>Cobotics ENHANCING HUMAN ABILITY WITH INTELLIGENT MOTION CONTROL</p>								
		CONFIGURATION SOFTWARE V. 0.0.2								
		<table border="1"> <tr> <td>NAME OF INSTALLATION</td> <td>NAME OF INSTALLED SYSTEM</td> </tr> <tr> <td>NAME OF INSTALLER</td> <td>STEVE KLOSTERMEYER</td> </tr> <tr> <td>LAST MOD DATE</td> <td>2/1/01</td> </tr> <tr> <td>START</td> <td><input type="checkbox"/> TUDO <input type="checkbox"/> NEC <input type="checkbox"/> COB <input type="checkbox"/> CC @WW <input type="checkbox"/> START <input type="checkbox"/> RE/87 <input type="checkbox"/> COB <input type="checkbox"/> CAR <input type="checkbox"/> RE/87 <input type="checkbox"/> CAR 11:29 PM</td> </tr> </table>	NAME OF INSTALLATION	NAME OF INSTALLED SYSTEM	NAME OF INSTALLER	STEVE KLOSTERMEYER	LAST MOD DATE	2/1/01	START	<input type="checkbox"/> TUDO <input type="checkbox"/> NEC <input type="checkbox"/> COB <input type="checkbox"/> CC @WW <input type="checkbox"/> START <input type="checkbox"/> RE/87 <input type="checkbox"/> COB <input type="checkbox"/> CAR <input type="checkbox"/> RE/87 <input type="checkbox"/> CAR 11:29 PM
NAME OF INSTALLATION	NAME OF INSTALLED SYSTEM									
NAME OF INSTALLER	STEVE KLOSTERMEYER									
LAST MOD DATE	2/1/01									
START	<input type="checkbox"/> TUDO <input type="checkbox"/> NEC <input type="checkbox"/> COB <input type="checkbox"/> CC @WW <input type="checkbox"/> START <input type="checkbox"/> RE/87 <input type="checkbox"/> COB <input type="checkbox"/> CAR <input type="checkbox"/> RE/87 <input type="checkbox"/> CAR 11:29 PM									
		2602								

FIG. 26



2702

LAYOUT PANEL
DESIGNATE THE OVERALL LAYOUT OF YOUR SYSTEM
CHECK THE BOXES OF
COMPONENTS YOU HAVE

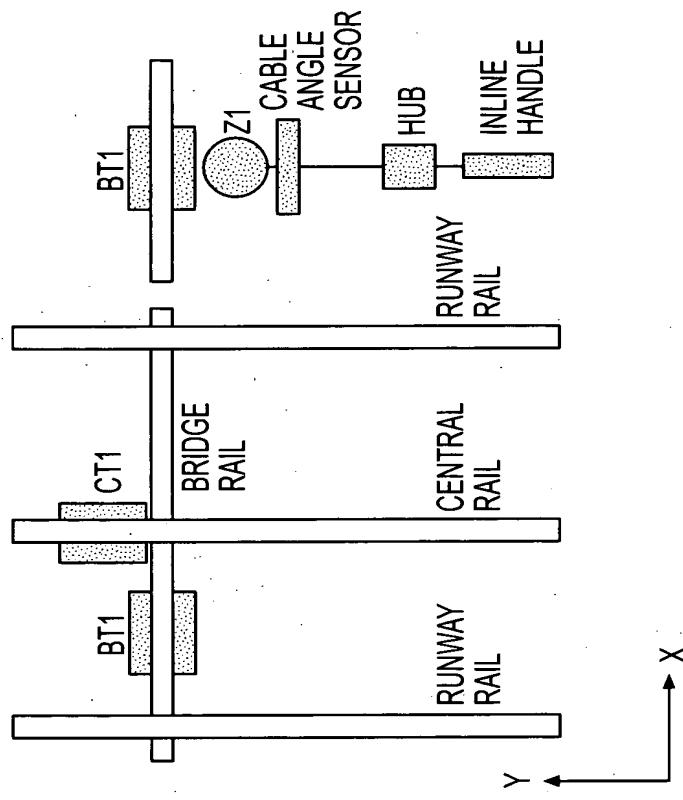
VERTICAL MOTION
 COBOTICS LIFT
 INLINE HANDLE
 PENDANT HANDLE

OTHER HOIST OR BALANCER
 LATERAL MOTION

- NONE
- MONORAIL SYSTEM WITH POWERED MOTION ALONG MONORAIL
- XY RAIL SYSTEM WITH POWERED MOTION OF BRIDGE
- BRIDGE IS MOVED BY TROLLEY ON CENTRAL RAIL
- ONE TROLLEY
- TWO TROLLEYS IN TANDEM
- CABLE ANGLE SENSOR
- PUSH-BUTTON ACTUATOR
- FORCE BAR
- COLUMN ROTATION SENSOR
- BRIDGE IS MOVED BY TROLLEY ON RUNWAY RAIL
- MOTION ALONG BRIDGE RAIL IS ALSO POWERED
- ONE TROLLEY
- TWO TROLLEYS IN TANDEM

PC-TO-HUB DATALINK CONNECT RX TX
SHOWING ACTIVE DATASET

PLAN VIEW



ELEVATION VIEW

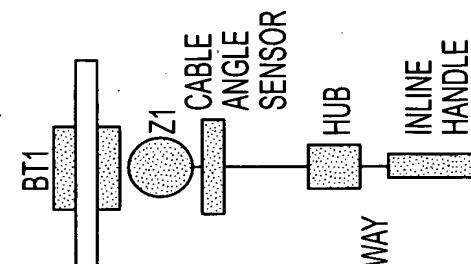


FIG. 27



IDENTIFICATION PANEL
CLICK TO LIGHT THE CORRESPONDING PHYSICAL UNIT, IN ORDER
TO IDENTIFY WHICH IS WHICH. ASSIGN EACH UNIT ITS ROLE BY
GIVING IT A LAYOUT CODES (REFER TO PICTURE FOR LAYOUT
CODES). THIS PANEL REQUIRES AN ACTIVE DATALINK.

CLICK ANY TO LIGHT ACTUAL EQUIPMENT

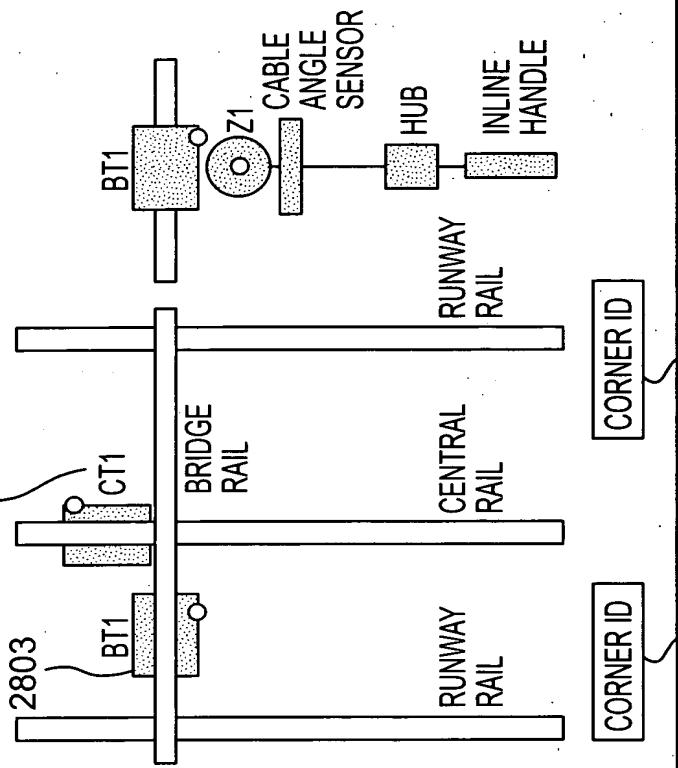
STATUS	IDENTIFY	THEN FILL THIS IN.	DESCRIPTION
UN-REGIST FOR ERED INFO	(CLICK TO LIGHT)	<input type="radio"/> Z1	SERIAL CODE
OK	<input type="radio"/>	000123	LIFT
OK	<input type="radio"/>	CT1	INLINE HANDLE
X	<input type="radio"/>	BT1	TROLLEY
2805	<input type="radio"/>	BT1	CABLE ANGLE SENSOR
2801	<input type="radio"/>	2804	RUNWAY RAIL
	<input type="radio"/>		CENTRAL RAIL
	<input type="radio"/>		RUNWAY RAIL
	<input type="radio"/>		BRIDGE RAIL
	<input type="radio"/>		HUB
	<input type="radio"/>		INLINE HANDLE
	<input type="radio"/>		CABLE ANGLE SENSOR

PC-TO-HUB DATALINK CONNECT RX TX
SHOWING ACTIVE DATASET

2702

PLAN VIEW

CORNER ID 2803 **FILL ME IN!**



2802

FIG. 28

2802



MOTION TEST PANEL
TEST COMPONENTS & CHECK INSTALLATION ORIENTATION
THIS PANEL REQUIRES AN ACTIVE DATALINK

STATUS	LAYOUT CODE	JOG FORWARD (+)	SENSOR INDICATOR
(CLICK FOR INFO)	IDENTIFY (CLICK TO LIGHT)	REVERSE (-) + END	JOG REVERSE }

OK	<input type="radio"/> Z1	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	ILIFT	2901	INLINE HANDLE
OK	<input type="radio"/> CT1	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	ITROLLEY		CABLE ANGLE SENSOR
OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	ITROLLEY	2902	CABLE ANGLE SENSOR
X	<input type="radio"/> BT1	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>			

MAKE SURE + MARK PRINTED ON EQUIPMENT AGREES WITH
+ MARK ON SCREEN; USE REVERSE BOX IF NEEDED
USE JOG BUTTONS ON SCREEN; CHECK FOR MOTION OF EQUIPMENT
MOVE SENSOR ON EQUIPMENT; CHECK FOR SENSOR INDICATOR
ON SCREEN →

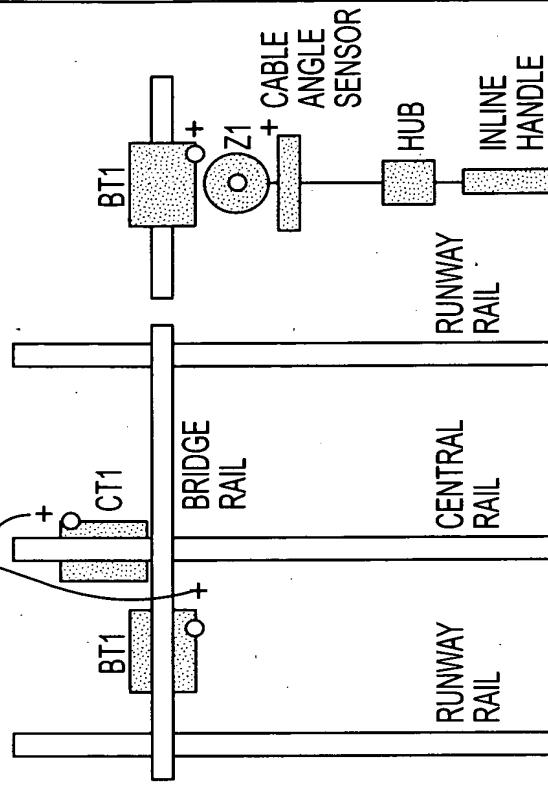
PC-TO-HUB DATALINK CONNECT RX TX
SHOWING ACTIVE DATABASE

2702

ELEVATION VIEW

PLAN VIEW

COMER ID 2904 COMER ID



COMER ID COMER ID

FIG. 29



LIFT SETUP PANEL		
PC-TO-HUB DATALINK <input checked="" type="radio"/> CONNECT <input checked="" type="radio"/> RX <input checked="" type="radio"/> TX SHOWING ACTIVE DATASET		
3001 3002 SET VALUE → LEARN ← INSTANTANEOUS VALUE		
SPEED LIMIT		
UPWARD	1.25 M/S	(HIGHER VALUES ARE PERKIER)
DOWNWARD	1.25 M/S	(DOWNWARD SLAVES UPWARD)
ACCELERATION LIMIT		
UPWARD	1.25 M/S ²	
DOWNWARD	1.25 M/S ²	
HANDLE		
SENSITIVITY	1.25	
DEADBAND	1.25%	
NULL	1.25	→ "LEARN" WHEN HANDLE IS AT NULL POSITION
MOTION STOPS	3003 → 3005 → 3004 → 3006 →	
UPPER	1.25 M	2.1234
LOWER	1.25 M	2.1234

FIG. 30

3100 ↘

LATERAL MOTION SETUP PANEL

PC-TO-HUB DATALINK ◎ CONNECT ◎ RX ◎ TX
SHOWING OFFLINE DATASET

SET VALUE ← LEARN ← INSTANT VALUE

SPEED LIMIT	██████████ 1.25 M/S	
ACCELERATION LIMIT	██████████ 1.25 M/S ²	
ESTIMATE OF MOVING MASS ON BRIDGE	██████████ 1.25 KG	○ MEASURE IT BY JOGGING BRIDGE
ESTIMATE OF MOVING MASS ON CARRIAGE	██████████ 1.25 KG	○ MEASURE IT BY JOGGING CARRIAGE
ESTIMATE OF BRIDGE LENGTH	██████████ 1.25 M	○ MEASURE IT BY SKEWING BRIDGE
BRIDGE SKEW NULL	1.25	← ◎ JOG + ○ JOG - JOG IT STRAIGHT; THEN "LEARN"
CABLE ANGLE SENSOR	██████████ 1.25	
SENSITIVITY	██████████ 1.25%	
DEADBAND	██████████ 1.25%	
NULL	1.25, 1.25, 5.00	← ◎ 2.1234 LEAVE IT VERTICAL; THEN "LEARN"
FORCE BAR		
SENSITIVITY	██████████ 1.25	
DEADBAND	██████████ 1.25%	
NULL	1.25, 1.25, 5.00	← ◎ 2.1234 DON'T TOUCH IT; THEN "LEARN"
END OF TRAVEL LIMIT RUNWAY (-Y)	1.25	← ◎ 2.1234
END OF TRAVEL LIMIT RUNWAY (+Y)	1.25	← ◎ 2.1234
END OF TRAVEL LIMIT BRIDGE (-X)	1.25	← ◎ 2.1234
END OF TRAVEL LIMIT BRIDGE (+X)	1.25	← ◎ 2.1234

FIG. 31





HUB LOGIC PANEL
SPECIFY INTERLOCK FUNCTIONS (OR OTHER LOGIC) ON COBOTICS HUB

PC-TO-HUB DATALINK CONNECT RX TX
SHOWING ACTIVE DATASET

3201

LOGIC FUNCTIONS

- (LOGIC 1) ACTIVATE PAYLOAD RELEASE (P1) SO LONG AS SWITCH S1 IS PRESSED
- (LOGIC 2) ACTIVATE PAYLOAD RELEASE (P1) WHEN SWITCH S1 IS PRESSED, BUT NOT IF INTERLOCK WEIGHT IS EXCEEDED. DE-ACTIVATE PAYLOAD RELEASE WHEN SWITCH S2 IS PRESSED.
- (LOGIC 3) ACTIVATE PAYLOAD RELEASE (P1) WHEN SWITCH S1 IS PRESSED, BUT NOT IF INTERLOCK WEIGHT IS EXCEEDED, AND NOT IF INTERLOCK HEIGHT IS EXCEEDED. DE-ACTIVATE PAYLOAD RELEASE WHEN SWITCH S2 IS PRESSED.
- (LOGIC 4) ACTIVATE PAYLOAD RELEASE (P1) WHEN SWITCH S1 IS PRESSED, BUT NOT IF INTERLOCK WEIGHT IS EXCEEDED, AND NOT IF INTERLOCK HEIGHT IS EXCEEDED. DE-ACTIVATE PAYLOAD RELEASE WHEN SWITCH S2 IS PRESSED.
- (LOGIC 5) ACTIVATE PAYLOAD RELEASE (P1) WHEN SWITCH S1 IS PRESSED. HOWEVER, IF INTERLOCK WEIGHT IS EXCEEDED OR INTERLOCK HEIGHT IS EXCEEDED, LOWER SLOWLY UNTIL THEY ARE NOT AND THEN RELEASE. DE-ACTIVATE PAYLOAD RELEASE WHEN SWITCH S2 IS PRESSED.
- CUSTOM LOGIC

3202

VIEW SELECTED LOGIC

3203

FIG. 32

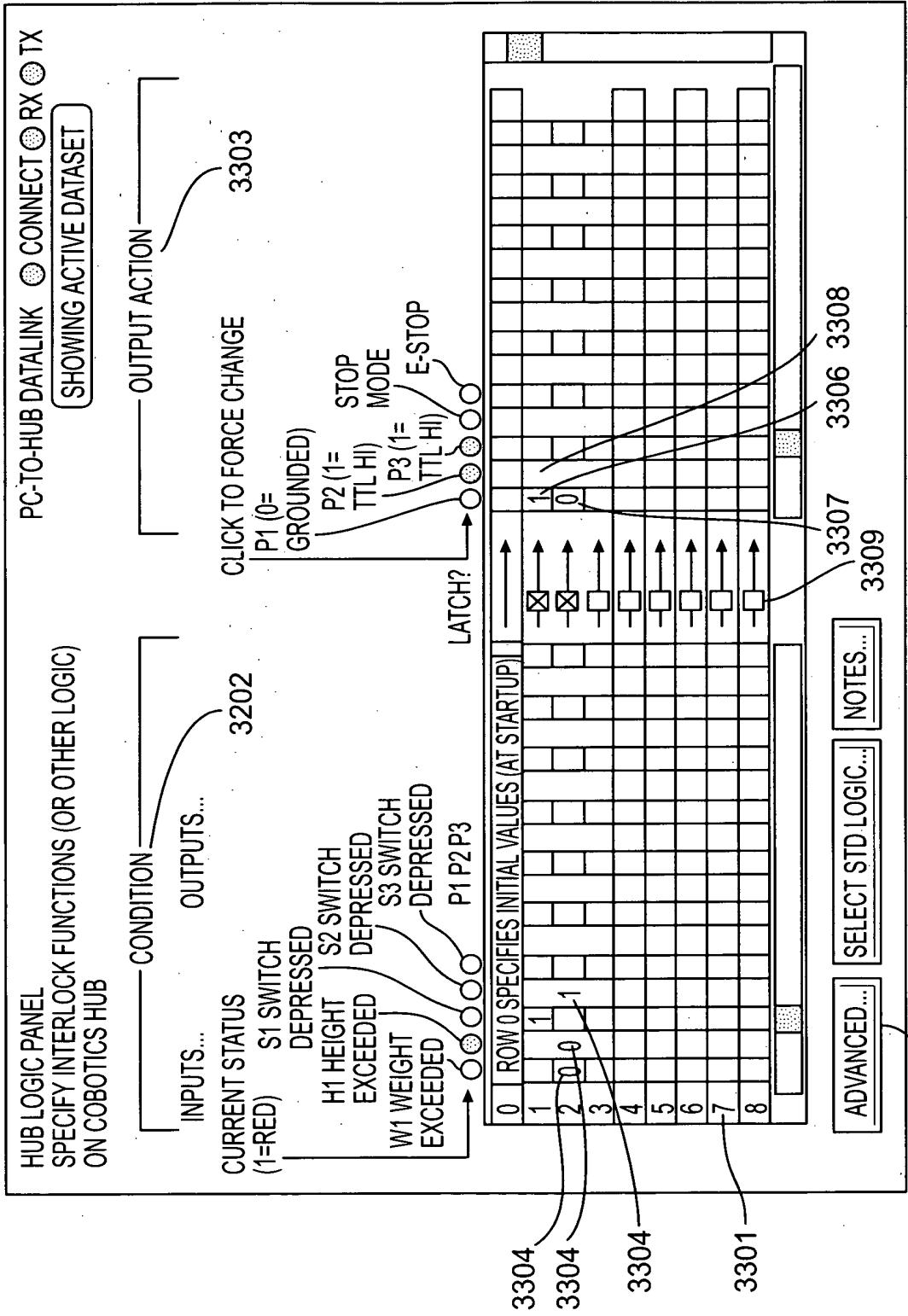


FIG. 33

3305



PROFILES SETUP PANEL
ALL SELECTIONS ARE SUBJECT TO OVERALL LIMITS,
ON LIFT & TROLLEY PAGES

PC-TO-HUB DATALINK Ⓜ CONNECT Ⓜ RX Ⓜ TX

SHOWING ACTIVE DATASET

PROFILE ID	3403	MD	HI	SK
OWNER NAME	STEVE KLOSTERMEYER			
LIFT SPEED LIMIT	MIN <input checked="" type="checkbox"/> MAX <input type="checkbox"/>			
ACCELERATION LIMIT	MIN <input checked="" type="checkbox"/>	MAX <input type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>
SENSITIVITY	MIN <input type="checkbox"/>	MAX <input checked="" type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>
DEADBAND	MIN <input type="checkbox"/>	MAX <input checked="" type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>
TROLLEY SPEED LIMIT	MIN <input type="checkbox"/>	MAX <input checked="" type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>
ACCELERATION LIMIT	MIN <input type="checkbox"/>	MAX <input checked="" type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>
SENSITIVITY	MIN <input type="checkbox"/>	MAX <input checked="" type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>
DEADBAND	MIN <input type="checkbox"/>	MAX <input checked="" type="checkbox"/>	MIN <input type="checkbox"/>	MAX <input type="checkbox"/>

USE DEFAULT VALUES OLO USE DEFAULT VALUES OLO USE DEFAULT VALUES OLO

CMD ORI	CMD ORI	CMD ORI
O REMOVE PROFILE	O REMOVE PROFILE	O REMOVE PROFILE
O ADD NEW PROFILE	O ADD NEW PROFILE	O ADD NEW PROFILE

INSTRUCTIONS: OPERATORS CAN SELECT THEIR INDIVIDUALIZED PROFILE AT THE HUB. MOVE SLIDERS TO ADJUST FEEL, SLIDER VALUES ARE RELATIVE TO LIMITS SET ON THE LIFT AND ITROLLEY SETUP PAGES. YOU CAN SET A PROFILE TO THE LO, MD OR HI DEFAULTS BY CLICKING A BUTTON.

FIG. 34

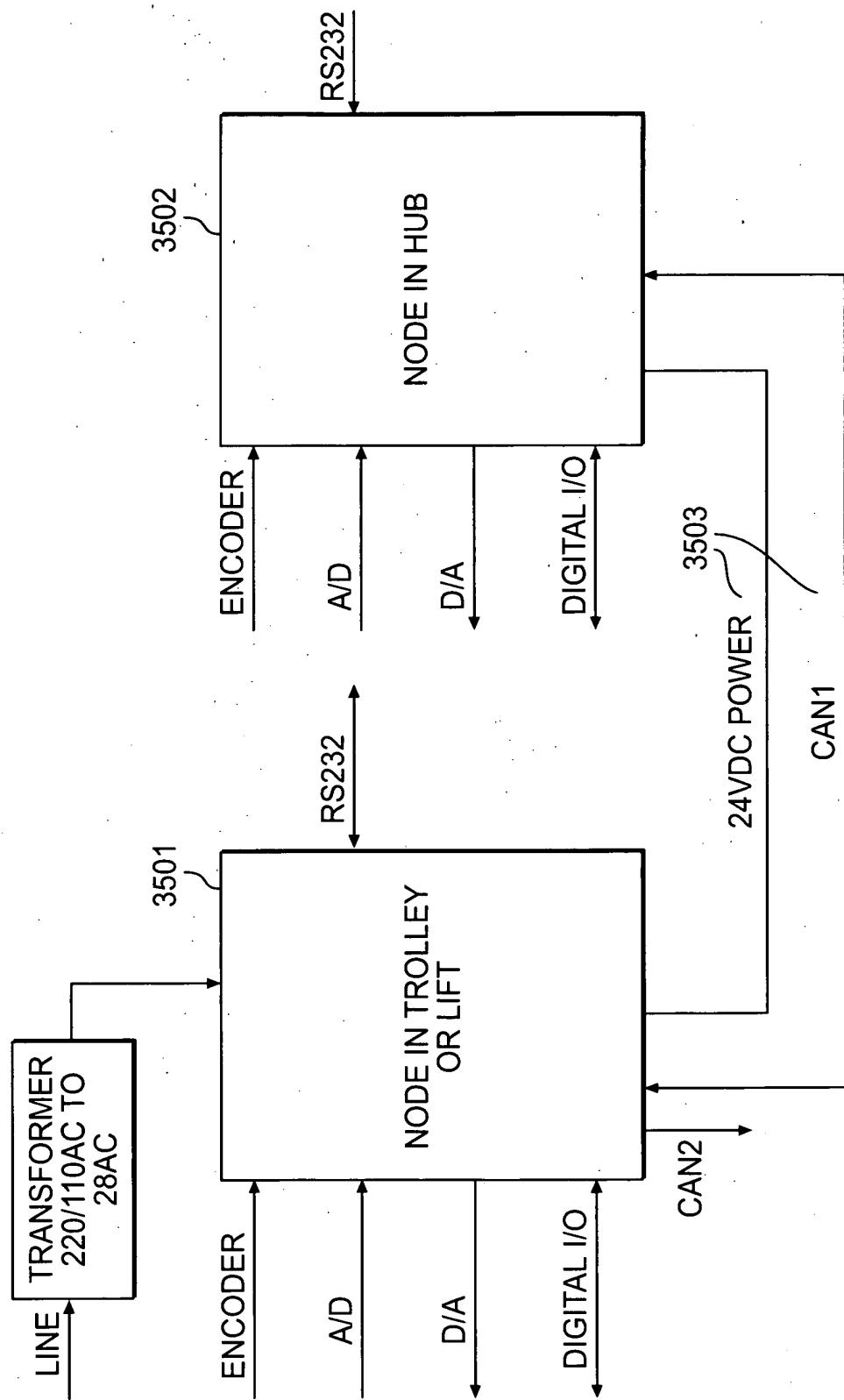


FIG. 35

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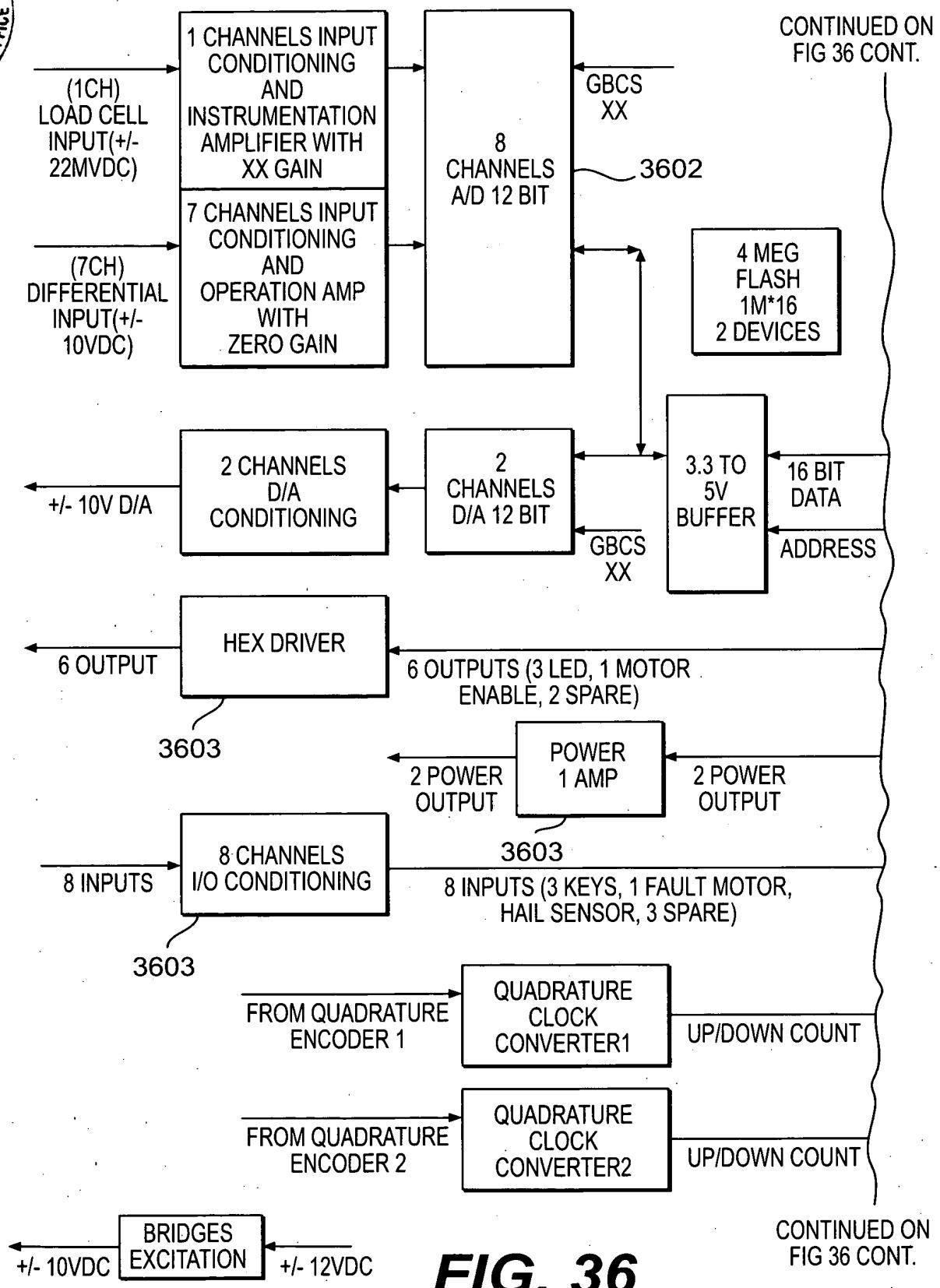
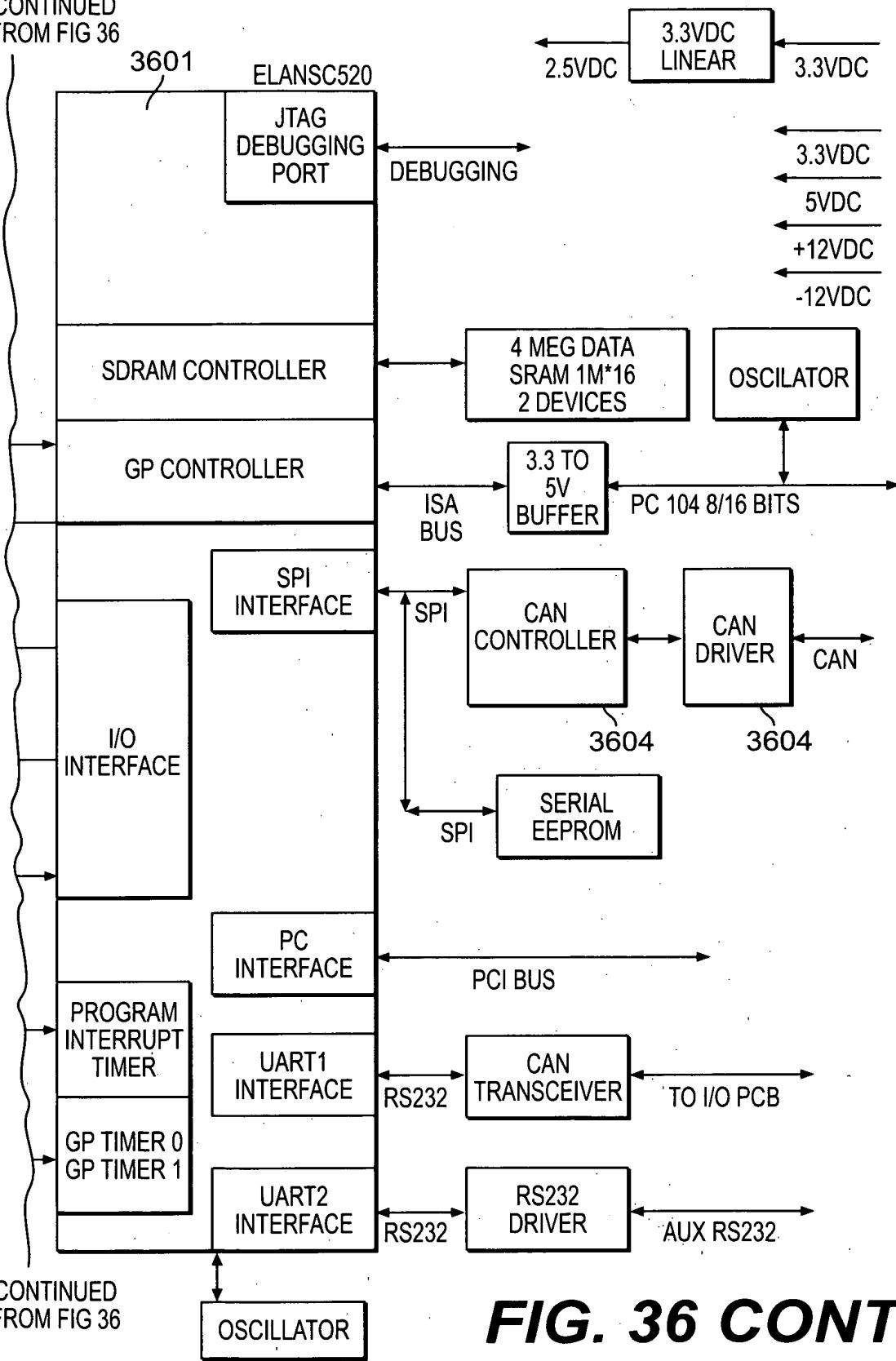


FIG. 36

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U.S. DEPARTMENT OF JUSTICE

CONTINUED
FROM FIG 36



CONTINUED
FROM FIG 36

FIG. 36 CONT.

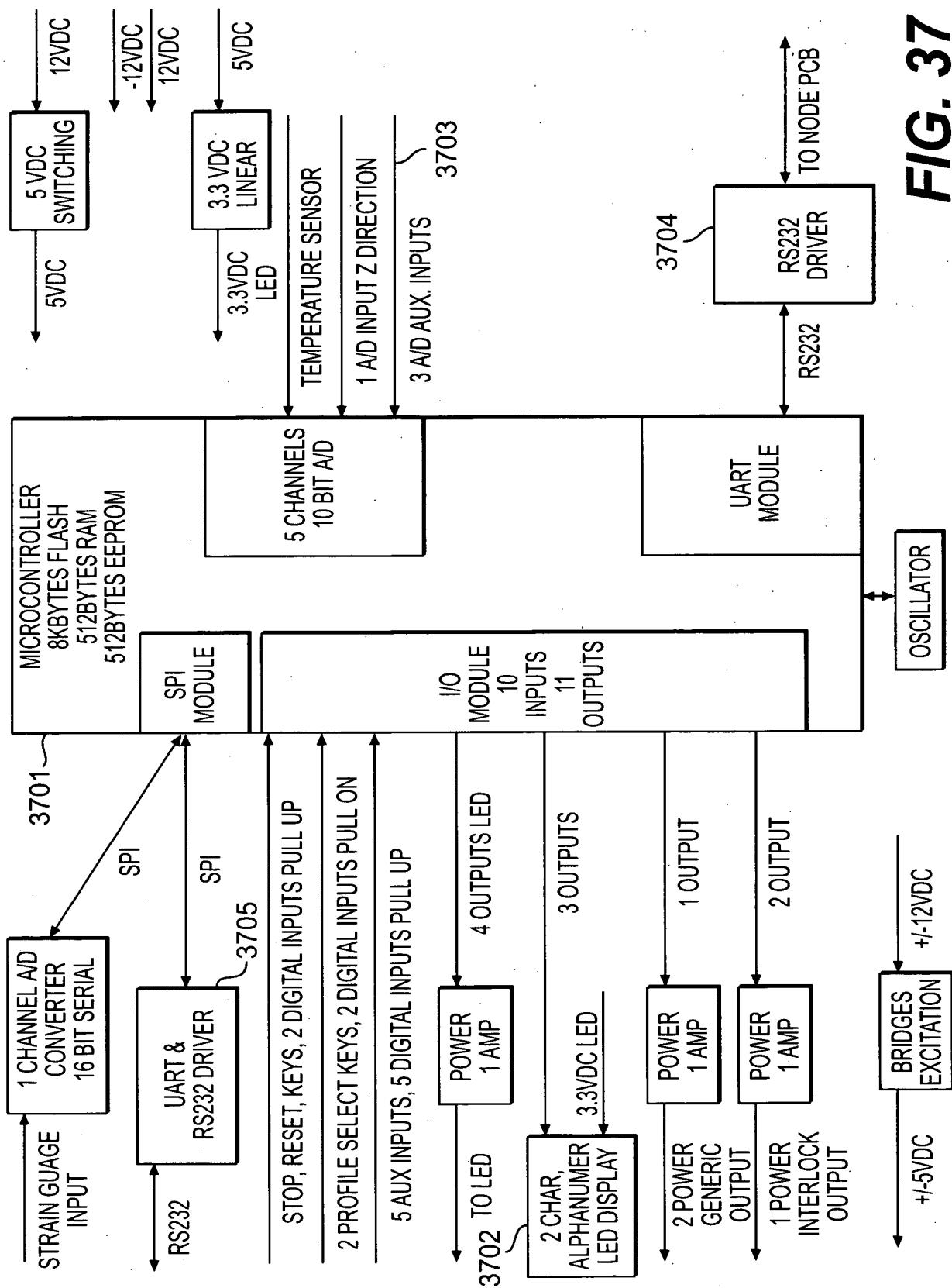


FIG. 37



FIELD	SIZE (BYTES)	DATA FORMAT	DESCRIPTION
SIZE	1	BINARY	PACKET SIZE.
DEVICE_ID	1	BINARY	DESTINATION DEVICE ID.
CMD_TYPE	1	BINARY	COMMAND TYPE.
DATA	VARIABLE	BINARY	ACTUAL DATA ASSOCIATED WITH THE CMD_TYPE FIELD.
CHKSUM	1	BINARY	CHECKSUM OF PACKET. THIS BYTE EQUALS TO THE TWO'S COMPLEMENT OF THE SUM OF THE SIZE, DEVICE_ID, TYPE AND DATA, OMITTING ANY CARRY.

FIG. 38